



DEPARTMENT OF THE ARMY  
U.S. Army Corps of Engineers  
WASHINGTON, D.C. 20314-1000

REPLY TO  
ATTENTION OF:

CECW-PE

MAR 16 2000

MEMORANDUM FOR Commander, Mississippi Valley Division, ATTN: CEMVD-PM

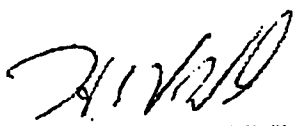
SUBJECT: Upper Mississippi River Navigation System Study

1. The purpose of this memorandum is to provide the results of our recent policy review of the subject study. In general, the review found that the district has conducted the study in consonance with the Principles and Guidelines. However, the study results and conclusions are sensitive to certain parameters and assumptions. Accordingly, additional information and explanation is required as indicated in the enclosed policy review comments. Responses to these comments shall be addressed in a policy compliance review memorandum.

2. The Principles and Guidelines provides on page 7, paragraph 6.1(i) that "various schedules, including staged construction, for implementing alternative plans should be considered." It further provides on page 51, paragraph 2.6.3(b)(3) that "project alternatives can differ in their timing as well as in their physical characteristics. Consider the optimal timing of projects and of individual project features in project formulation, so as to maximize net benefits over time." The district incorporated optimal timing into plan formulation, labeling an optimally timed plan as the national economic development plan. Although this approach is generally consistent with the Principles and Guidelines, it may not be the best way to incorporate the Principles and Guidelines guidance. While this approach is acceptable for this project, it should not be applied to other projects without specific approval.

3. An Alternative Formulation Briefing, to discuss the resolution of the enclosed comments and the schedule for completion of the report, shall be scheduled prior to public or interagency coordination of a tentatively selected plan.

FOR THE COMMANDER:

  
HANS A. VAN WINKLE  
Major General, USA  
Deputy Commander for  
Civil Works

Enclosure

## Policy Review Comments

### QUALITY MANAGEMENT

The economics and plan formulation independent technical review teams should be expanded to include other Corps districts, navigation industry representatives, and public sector interests. Overlap of membership on the independent technical review teams would also substantially enhance the overall product quality.

### ENGINEERING

(a) The district should reexamine the major rehabilitation scheduling and costs in the without and with project conditions by factoring in the projected number of lockages.

(b) The district should complete a rigorous engineering independent technical review of the final array of plans, including operational characteristics, reliability, and cost estimate contingencies.

### ECONOMICS

(a) The district should review forecasted traffic volumes in light of actual, observed traffic volumes and any changes that have occurred since the forecasts were made to determine if the assumptions in the underlying model are still valid. Differences between actual and forecasted traffic volumes shall be explained. A statistical analysis demonstrating the relationship of actual traffic volumes to confidence bands associated with the forecasted volumes should be included. Such an analysis may need to consider both the unconstrained, forecasted traffic as well as the demand curves for barge transportation.

(b) The district should reexamine the demand curves and the assumptions regarding the most-likely and potential range on N values. Such reexamination may include time series data, information on markets and prices in states in addition to Iowa, and expert panels.

(c) Consideration should be given to disaggregating the grain movement data by distance from the river and applying demand curves to reflect the distances as well as regional and/or area differences in alternative markets.

(d) To the extent practicable, the district should review the reasonableness of the aggregated data to determine if the model accurately reflects seasonal peak usage and costs of movement.

(e) The district should consider estimating land transport rates to alternative pools for river loading to account for this type of alternative transportation opportunity.

(f) The district should consider consulting with USDA and other experts to determine if there is a potential for measuring national economic development benefits from maintaining net income to producers and export markets by reducing transportation costs. Such effects that

cannot be measured in the national economic development account should be addressed in the regional economic development account.

## ENVIRONMENTAL ANALYSIS

- (a) More information of the impacts on recreational boating is necessary.
- (b) Mitigation for navigation impacts needs to consider the extent of other impacts. For example, if sedimentation from other sources results in losses of biological resources, then any additional sedimentation from proposed changes in navigation in these areas will not increase the losses and mitigation will not be required.
- (c) Translate benefits into fish or habitat, rather than using the cost of hatchery reared replacement fish.
- (d) Provide more detailed information on how significance was determined.
- (e) An incremental analysis in compliance with ER 1105-2-100 is required.
- (f) Further discussions in the report are necessary to identify appropriate tools and management framework for working with the mitigation proposed now and into the future.
- (g) Further discussion in the report is needed to substantiate or quantify the impacts associated with increased traffic on alternative modes.

## PLAN FORMULATION

- (a) The district should critically review utilization of mooring devices and industry self help as well as projected traffic growth under the alternative future without conditions.
- (b) The district should conduct a sensitivity analysis on its self help analysis and assumptions.
- (c) The district should conduct sensitivity analysis on the timing and cost of major rehabilitations in the with and without project conditions.
- (d) The district should conduct and document the sensitivity analyses prescribed in the P&G for navigation projects (Paragraph 2.6.15(d)).

CECW-PE

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(e) The district must assure that all key inputs and outputs (delays, queues, tonnage benefits, etc.) of the formulation process are well documented and are certified by an appropriate independent technical review team.

(f) If the district plans to include Peoria and LaGrange as deferred construction, costs and benefits for such a plan must be included in the district's report.

(g) In order to recommend the tentatively selected plan, the reporting officers need to address other Federal, state, local, and international concerns including regional economics, risk and uncertainty, trade considerations, and environmental effects of alternative modes of transportation. The district should also compute the potential benefits foregone that could result from a delay in completion of the project.